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Claims:

1. A method of generating an electrical output signal as a function of acoustical input signals impinging on at least two acoustical/electrical converters, the gain between said acoustical input signals and said electric output signal being dependent on the spatial angle with which said acoustical input signals impinge on said at least two converters and on frequency of said acoustical input signals, and wherein further first and second signals respectively depending on said acoustical input signals are co-processed to result in a third signal which is dependent on both said first and said second signals, characterized by establishing a desired frequency dependency of said gain by installing a mismatch of gain of said acoustical input signal to said first signal and of said acoustical input signal to said second signal.
2. The method of claim 1, wherein said mismatch is installed in a fixed manner or adjustable or automatically adjusted.
3. The method of claim 1 or 2, further comprising establishing said mismatch in dependency of said spatial angle of said acoustical input signals.
4. The method of claim 3, further comprising establishing said mismatch, whenever said spatial angle is within a predetermined range.

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5. The method of claims 1 to 4, further comprising establishing said mismatch in dependency of frequency of said acoustical input signal.

6. The method of one of claims 1 to 5, further comprising
5 time-delaying one of said first and of said second signals before performing said co-processing.

7. The method of claim 6, further comprising performing said time-delaying in dependency of frequency of said acoustical input signals.

8. The method of one of claims 1 to 7, further comprising
10 performing time-domain to frequency-domain conversion of said first and second electrical signals before performing said co-processing.

9. The method of one of claims 1 to 8, further comprising
15 performing time-domain to frequency-domain conversion of said first and second electrical signals, generating for subsequent time frames of said converting and for at least a part of the frequencies of said conversion a complex mismatch control signal, thereby adjusting mutual phasing
20 of said first and second signals and performing said mismatch by said complex mismatch control signal.

10. The method of claim 9, thereby calculating an actual mismatch control signal by means of an approximation algorithm.

25 11. The method of claim 10, further comprising calculating said actual mismatch control signal on the basis of said mismatch control signal as derived in a previous time frame.

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12. The method of claim 10, further comprising the step of calculating said actual mismatch control signal by means of a "least means square" algorithm.

13. An acoustical/electrical conversion system comprising at least two acoustical to electrical converters, respectively with a first and a second output, said outputs being operationally connected to inputs of a co-processing unit generating an output signal dependent on signals on both said first and said second outputs, the output of said co-processing unit being operationally connected to an output of said system, whereat a signal is generated, which is dependent on an acoustical signal impinging on said at least two converters and from spatial angle with which said acoustical signal impinges on said at least two converters as well as on frequency of said acoustical signal, characterized by the gains between acoustical inputs to said converters and said inputs of said co-processing unit being mismatched to provide for a desired dependency of said signal generated at said output of said system from said frequency.

14. The system of claim 13, wherein said mismatch is established by means of a mismatch unit interconnected between at least one of said first and second outputs and said inputs of said co-processing unit.

15. The system of claim 14, said mismatch unit comprising a mismatch control input operationally connected to an output of a mismatch control unit, inputs of said mismatch control unit being operationally connected to said first and second outputs, said mismatch control unit generating a

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mismatch control signal in dependency of said spatial angle.

16. The system of claim 15, wherein said mismatch control unit generates a mismatch control signal, whenever said
5 spatial angle is within a pre-selectable or pre-selected angular range.

17. The method of one of claims 14 to 16, further comprising said mismatch unit providing for gain mismatch and phase adjustment.

10 18. The system of one of claims 14 to 17, further comprising time-domain to frequency-domain conversion units interconnected between said outputs of said at least two converters and said co-processing unit, said mismatch unit being provided between an output of at least one of said
15 time-domain to frequency-domain conversion units and at least one input of said co-processing unit.

19. The system of claim 18, said mismatch unit having a control input operationally connected to an output of a mismatch control unit, said mismatch control unit having
20 inputs operationally connected to said first and second output signals and generating a complex mismatch controlling signal controlling at said mismatch unit phasing of signals input to said inputs of said co-processing unit as well as said gain mismatch.

25 20. The system of claim 19, wherein said mismatch control has one of said inputs being operationally connected to the output of said system, said mismatch control unit comprising an approximation calculating unit.

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21. The system of claim 20, wherein said approximation calculating unit is a "least means square" calculating unit.

22. The method of one of claims 1 to 12, wherein said
5 acoustical to electrical converters are microphones of a hearing aid apparatus.

23. The system of one of claims 13 to 21, wherein said acoustical to electrical converters are integrated in a hearing apparatus.

10 24. The system of claim 23, wherein said apparatus is a hearing aid apparatus.

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